

WHAT IS CLAIMED IS:

Sub A
C 1

1. Process for treating a polished semiconductor wafer comprising polishing a surface of a semiconductor wafer; and immediately after polishing the semiconductor wafer, bringing the semiconductor wafer into contact with an aqueous treatment agent solution for oxidizing the polished surface by action of the aqueous treatment agent solution.

2. Process according to Claim 1, comprising bringing the semiconductor wafer into contact with the aqueous treatment agent solution containing an oxidizing agent and an alkaline component.

3. Process according to Claim 1, comprising bringing the aqueous treatment agent solution into contact with the semiconductor wafer by spraying the semiconductor wafer with the aqueous treatment agent solution.

4. Process according to Claim 1, comprising

bringing the aqueous treatment agent solution into contact with the semiconductor wafer by dipping the semiconductor wafer into the aqueous treatment agent solution.

5. Process according to Claim 1, comprising

bringing the aqueous treatment agent solution into contact with the semiconductor wafer by and applying the aqueous treatment agent solution to the polished surface of the semiconductor wafer by means of a cloth which has been moistened with the aqueous treatment agent solution.

C 6. Process according to Claim 1, comprising

bringing the semiconductor wafer into contact with the aqueous treatment agent solution in a polishing machine.

C 7. Process according to Claim 1, comprising

bringing the semiconductor wafer into contact with the aqueous treatment agent solution in an unloading station of a polishing machine.

8. The process as claimed in Claim 1, comprising
storing the semiconductor wafer in deionized water after
contact with the aqueous treatment agent solution.

9. The process as claimed in Claim 1,¹⁴

wherein the aqueous treatment agent solution comprises an
aqueous solution of

(1) from 0.02% to 3.0% by volume, based upon the total
solution volume, of an oxidizing agent;

(2) from 0.01% to 2.0% by weight, based upon the total
solution weight, of an alkaline component; and

(3) the balance up to 100% by volume being water based
upon the total solution volume, and the balance up to 100% by
weight being water, which is based upon the total solution weight.

10. The process as claimed in Claim 1,¹⁴

wherein the aqueous treatment agent is at a temperature
range of from 18°C to 65°C.

11. The process as claimed in Claim 7,
14

wherein the oxidizing agent is hydrogen peroxide and the
alkaline component is selected from the group consisting of
tetramethylammonium hydroxide, ammonium hydroxide, potassium
hydroxide, sodium hydroxide, potassium carbonate and the mixtures
thereof.

12. The process as claimed in Claim 9,

wherein the oxidizing agent is hydrogen peroxide and the
alkaline component is selected from the group consisting of
tetramethylammonium hydroxide, ammonium hydroxide, potassium
hydroxide, sodium hydroxide, potassium carbonate and the mixtures
thereof.

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B2

add C1
C2

add
D2